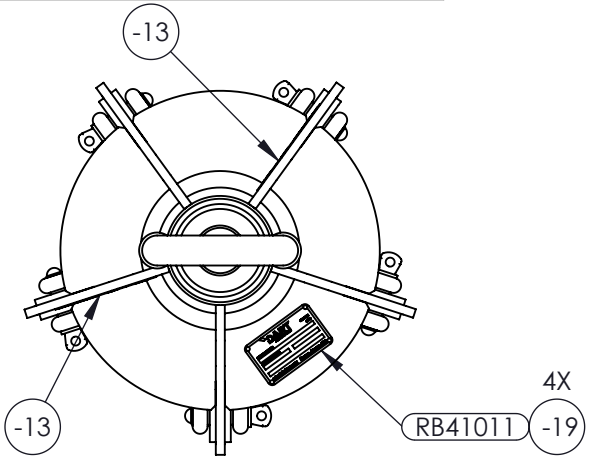
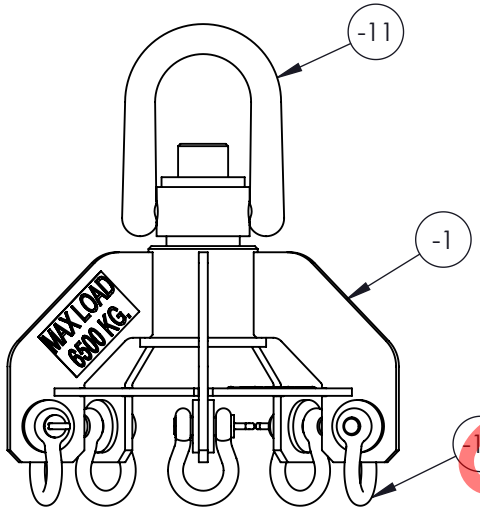
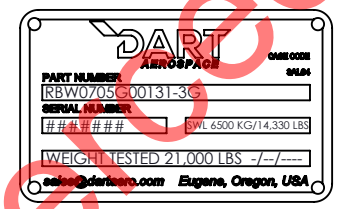




REVISIONS

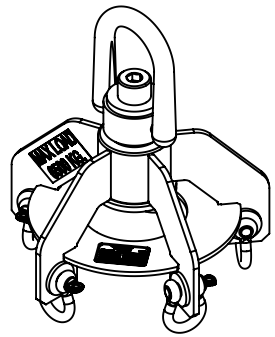
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
A		**-5** CH'D ENGRAVE NOTE.	5/27/2009	RJC	
B		CH'D T/N FROM RBW0705G00131 TO RBW0705G00131-3G.	4/14/2010	RJC	RW
1		**-3** & **-5** SEPARATED WELDING & ASSEMBLY DWGS. **-3** REDESIGNED TOOL CENTER PIN WAS Ø5.50 X 10.06 WITH A SHACKLE HOLE NOW ITS Ø5.25 X 4.20 WITH AN EYEBOLT HOLE, ADDED EYE BOLT AND DWG. **-7** ARM WAS .38 X 6.14 X 9.88 IS .38 X 6.24 X 8.75.	10/29/2010	WP	DW
2		DELETED -11 THRU -15, -21, -23 & -27 REPLACED WITH HOIST RING -11. **-3** CH'D DEPTH OF BORE FROM 2.95 TO 1.57 & THREADED HOLE 1-1/4-7 UNC.	12/8/2010	RJC	
3		**-1** DELETED ENGRAVE NOTE. **-3** ADDED .12 X 45° CHAMFER.	8/29/2011	RJC	RW
3A		**-13** CH'D LETTER SIZE WAS 1/2 IS 1.	2/26/2013	BIM	RW
3B		ADDED FIRST ARTICLEWEIGHT TEST SHEET.	10/31/2013	RJC	RW
4		UPDATED TITLEBLOCKS TO DART. **-7** CH'D DIM WAS .323 - .313 IS (.313) S.F. -5.	6/17/2014	DJN	GE
5	15-0301	**-3, -5, -7** CH'D MATERIAL CALLOUT WAS 1018 IS 1018/1020. **-5** ADDED .20 X 45° CHAMFER AND 10X R.02. **-7** ADDED .12 X 45° CHAMFER. **-13** ADDED DRAWING.	9/15/2015	RJC	JAG
6	17-0039	**-1** CH'D WELD NOTE WAS 5X FILLET NEAR SIDE, FAR SIDE, ALL AROUND IS 5X FILLET NEAR SIDE, FAR SIDE. CH'D FINISH WAS POWDER COAT RED WAGON FORREST #T-3370 S9 IS POWDER COAT RED. **-3** CH'D MAT'L WAS 1018/1020 IS A514 CR. **-5** CH'D MAT'L WAS 1018/1020 IS A514 CR. CH'D DIM WAS 5X .375-.385 IS 5X .392-.400. **-7** CH'D MAT'L WAS 1018/1020 IS A514 CR. CH'D DIM WAS (.313 S.F. -5) IS .350-.342 (S.F. -5). **-9** CH'D MAT'L WAS 1018/1020 IS A514 CR. **-13** CH'D TOLERANCES WAS ±.005 IS ±.010, WAS ±.01 IS ±.03. **-15** REPLACED W/ **RB41011**. **-19** CH'D B/O REF WAS (#90081A074) IS (#90081A077).	2/9/2017	DPD	JAG

SEE ATTACHED DEVIATION



RB41011

DART PLACARD



NOTES:
1. WEIGHT TEST TO 21,000 LBS.
2. RBW0705G00131-3G REPLACES AGUSTA T/N 3G0705G00131.
3. TORQUE HOIST RING TO RECOMMENDED TORQUE SHOWN ON THE RING.

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
	X		-1	1	WELDMENT			2
	1		-3		CENTER PIN	A514 CR		3
	1		-5		RING	A514 CR		4
	5		-7		ARM	A514 CR		5
	10		-9		SPACER	A514 CR		6
		B/O	-11	1	HOIST RING	FORGED ALLOY STEEL	15,000 lbs. MCMASTER-CARR #2994T81	1
		B/O	-13	2	EMBLEM	CLEAR PLASTIC	2-3/8 X 3-7/8 (SIGNS NOW)	7
		B/O	-17	5	ANCHOR SHACKLE W/SCREW PIN	GALV. STEEL	Ø3/4 PIN 3-1/2 TON (MCMASTER-CARR #3558T51)	1
		B/O	-19	4	#2 DRIVE SCREW	COATED STEEL	#2 X 1/4 (MCMASTER-CARR #90081A077)	1
		B/O		1	DART PLACARD	ALUMINUM	RB41011	1
	ASSY -1							

DART AEROSPACE

TITLE: AC & MR LIFTING SLING

DWG NO. RBW0705G00131-3G REV 6

MAT'L	
HEAT TREAT	
FINISH	
SPEC	
DRAWN BY:	PERRITT
CHECKED:	SM 02/10/2017
OPPS APPR:	AA 02/13/2017
QA APPR:	JL 05/09/2017
APPROVED:	JAG 05/09/2017

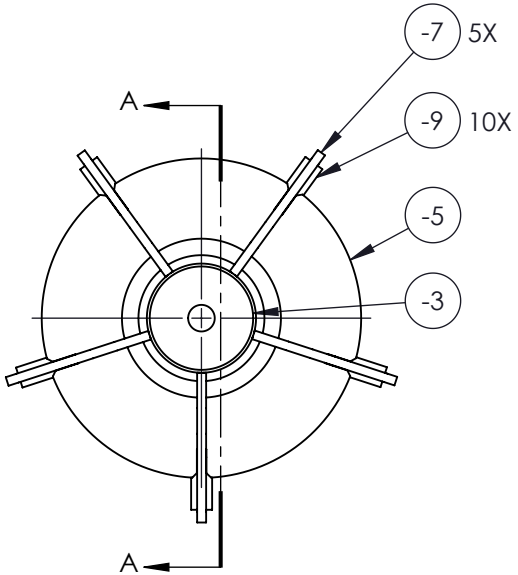
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
.XXX ± .005 FRACTIONS ± 1/8
.XX ± .01 ANGLES ±.5°
.X ± .1 SURFACES = 125
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

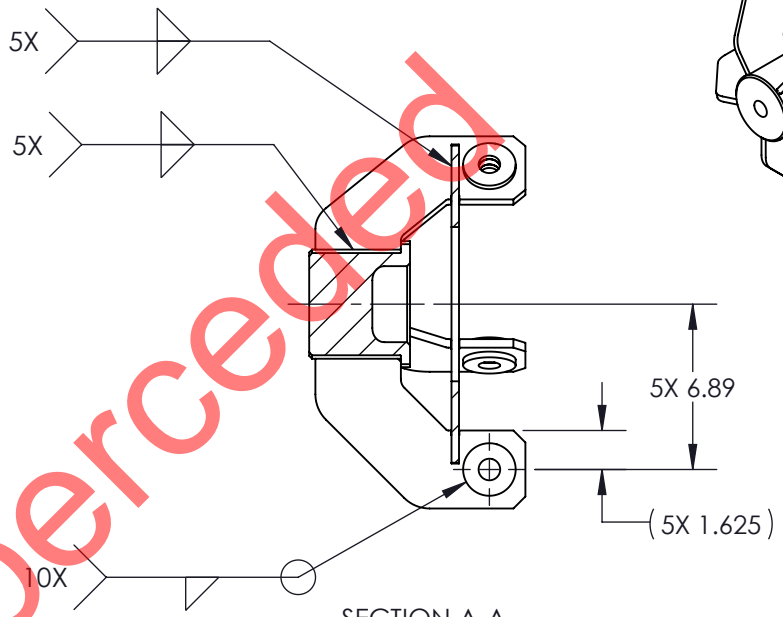
USED ON MODEL: AW139

SCALE 1:8 DATE 4/1/2009 SHEET 1 OF 8

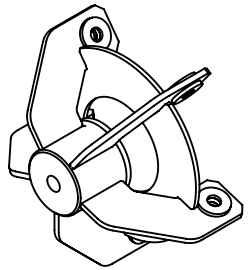
REVISIONS

REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		**-3** & **-5** SEPARATED WELDING & ASSEMBLY DWGS.	10/29/2010	WP	DW
3		**-1** DELETED ENGRAVE NOTE.	8/29/2011	RJC	RW
6	17-0039	**-1** CH'D WELD NOTE WAS 5X FILLET NEAR SIDE, FAR SIDE, ALL AROUND IS 5X FILLET NEAR SIDE, FAR SIDE. CH'D FINISH WAS POWDER COAT RED WAGON FORREST #T-3370 S9 IS POWDER COAT RED.	2/9/2017	DPD	JAG





SECTION A-A



SEE ATTACHED DEVIATION

-1

WELDMENT

DART AEROSPACE

TITLE: AC & MR LIFTING SLING

DWG NO. RBW0705G00131-3G-1 REV. 6

MAT'L	
HEAT TREAT	
FINISH	POWDER COAT RED
SPEC	
DRAWN BY:	PERRITT
CHECKED:	SM 02/10/2017
OPPS APPR:	AA 02/13/2017
QA APPR:	JL 05/09/2017
APPROVED:	JAG 05/09/2017

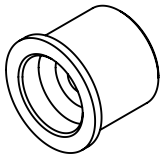
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
.XXX ± .010 FRACTIONS ± 1/8
.XX ± .03 ANGLES ±1°
.X ± .1 SURFACES = 125
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

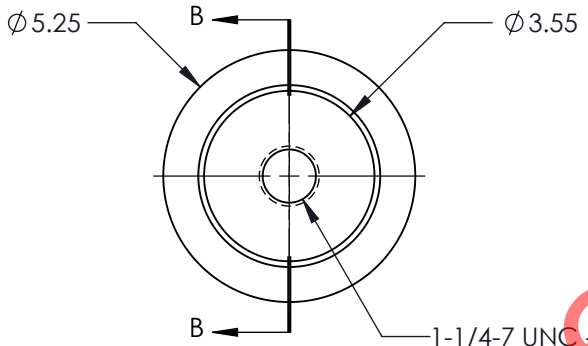
USED ON MODEL: AW139

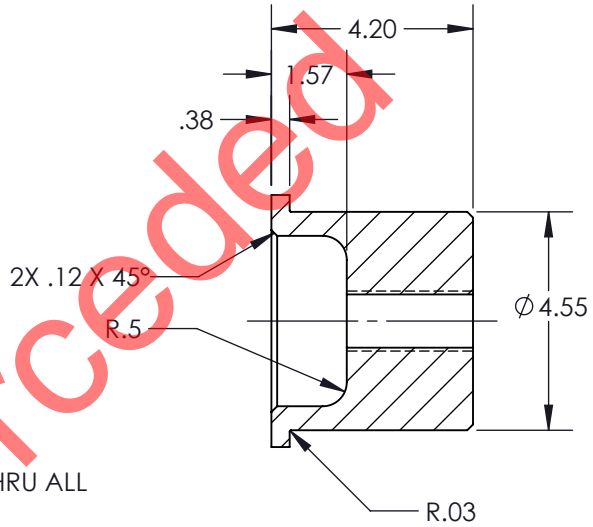
SCALE 1:8 | DATE 4/1/2009 | SHEET 2 OF 8

REVISIONS

REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		**-3** REDESIGNED TOOL CENTER PIN WAS Ø5.50 X 10.06 WITH A SHACKLE HOLE NOW ITS Ø5.25 X 4.20 WITH AN EYEBOLT HOLE, ADDED EYE BOLT AND DWG.	10/29/2010	WP	DW
2		**-3** CH'D DEPTH OF BORE FROM 2.95 TO 1.57 & THREADED HOLE 1-1/4-7 UNC.	12/8/2010	RJC	
3		**-3** ADDED .12 X 45° CHAMFER.	8/29/2011	RJC	RW
5	15-0301	**-3** CH'D MATERIAL CALLOUT WAS 1018 IS 1018/1020.	9/15/2015	RJC	JAG
6	17-0039	**-3** CH'D MAT'L WAS 1018/1020 IS A514 CR.	2/10/2017	DPD	JAG







SECTION B-B

SEE ATTACHED DEVIATION

-3

CENTER PIN

DART AEROSPACE

TITLE: AC & MR LIFTING SLING

DWG NO. RBW0705G00131-3G-3 REV 6

MAT'L	A514 CR
HEAT TREAT	
FINISH	SEE -1
SPEC	
DRAWN BY:	PERRITT
CHECKED:	SM 02/10/2017
OPPS APPR:	AA 02/13/2017
QA APPR:	JL 05/09/2017
APPROVED:	JAG 05/09/2017
SCALE	1:4
DATE	4/1/2009

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
.XXX ± .005 FRACTIONS ± 1/8
.XX ± .01 ANGLES ±.5°
.X ± .1 SURFACES = 125

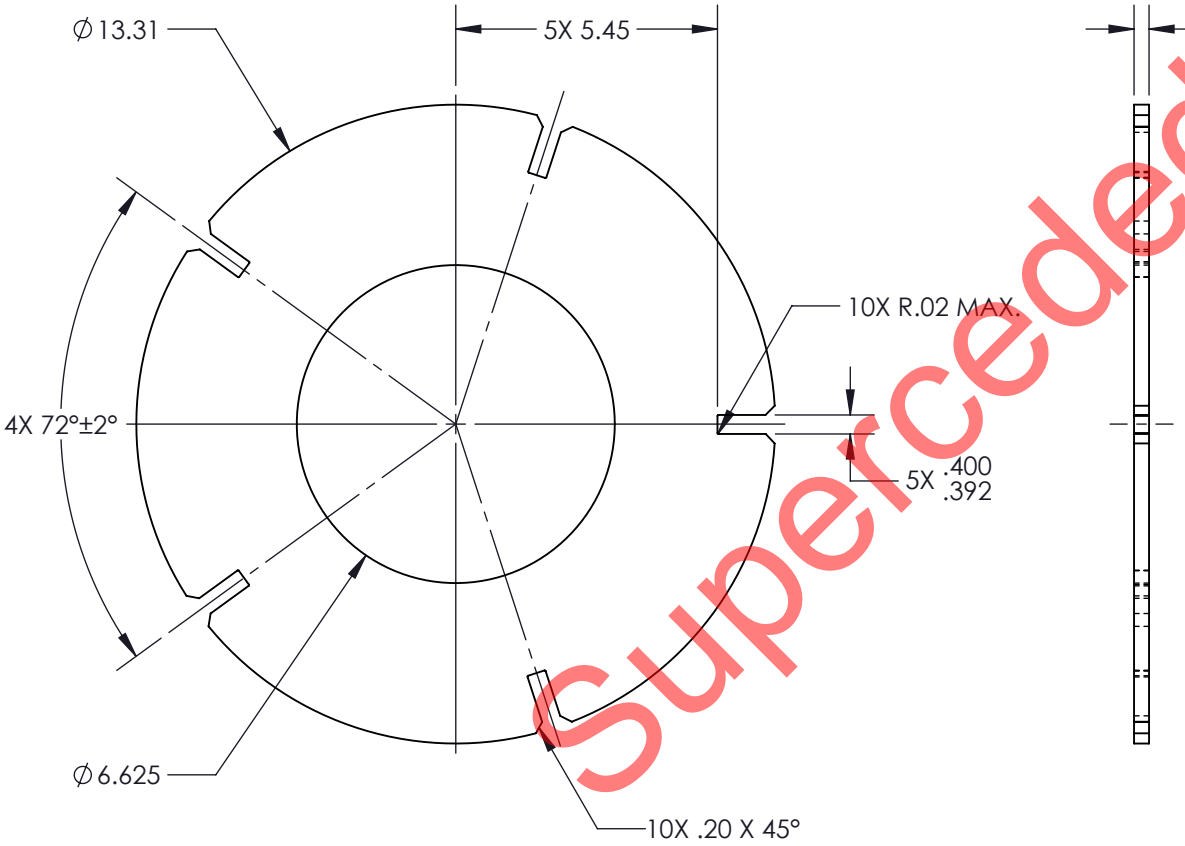
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

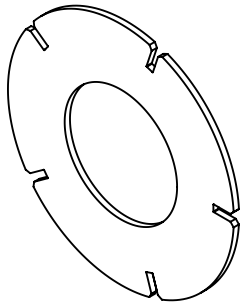
USED ON MODEL: AW139

SHEET 3 OF 8

REVISIONS

REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
A		**-5** CH'D ENGRAVE NOTE.	5/27/2009	RJC	
5	15-0301	**-5** CH'D MATERIAL CALLOUT WAS 1018 IS 1018/1020, ADDED .20 X 45° CHAMFER AND 10X R.02.	9/15/2015	RJC	JAG
6	17-0039	**-5** CH'D MAT'L WAS 1018/1020 IS A514 CR. CH'D DIM WAS 5X .375-.385 IS 5X .392-.400.	2/10/2017	DPD	JAG





SEE ATTACHED DEVIATION

DART AEROSPACE

TITLE: AC & MR LIFTING SLING

DWG NO. RBW0705G00131-3G-5 REV. 6

MAT'L	A514 CR
HEAT TREAT	
FINISH	SEE -1
SPEC	
DRAWN BY:	PERRITT
CHECKED:	SM 02/10/2017
OPPS APPR:	AA 02/13/2017
QA APPR:	JL 05/09/2017
APPROVED:	JAG 05/09/2017
SCALE	1:4
DATE	4/1/2009

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
.XXX ± .010 FRACTIONS ± 1/8
.XX ± .03 ANGLES ±1°
.X ± .1 SURFACES = 125

1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

USED ON MODEL: AW139

SHEET 4 OF 8

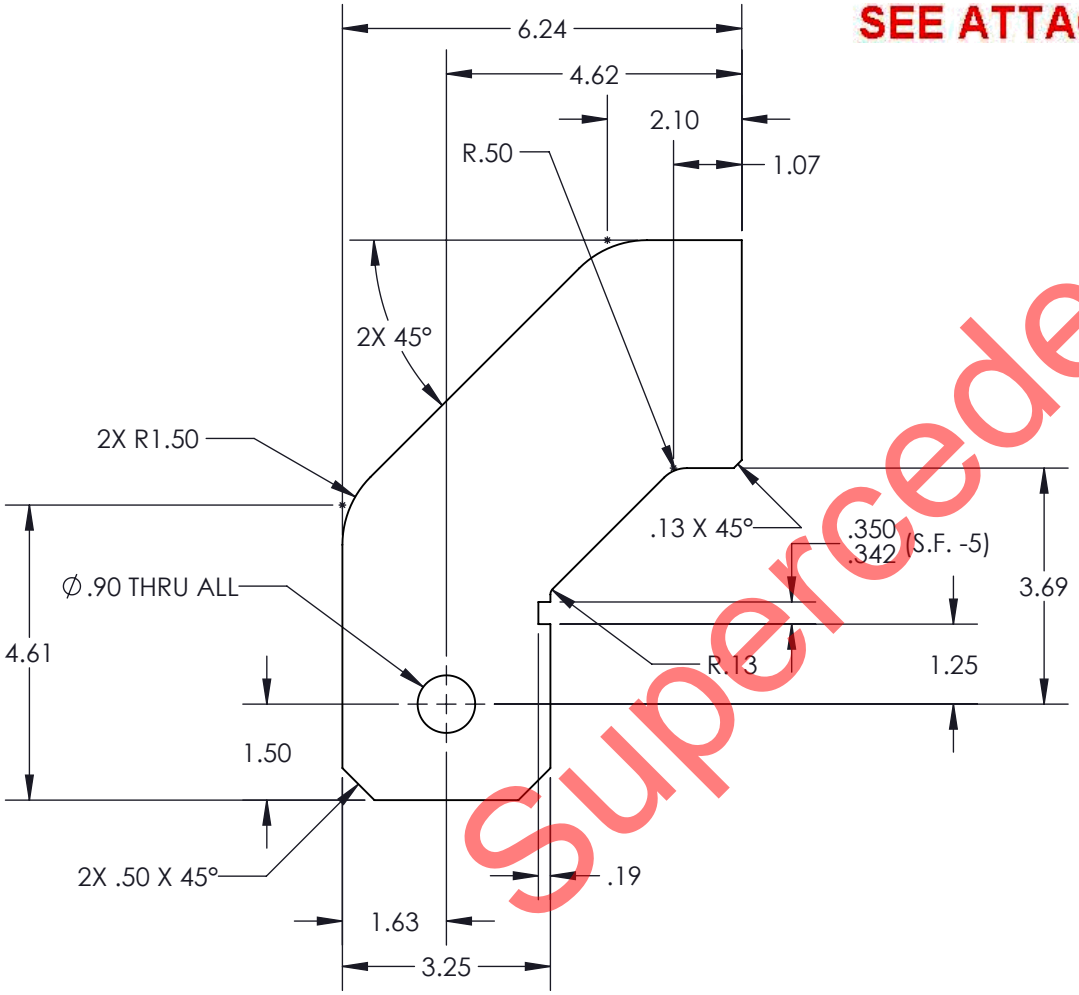
(-5)

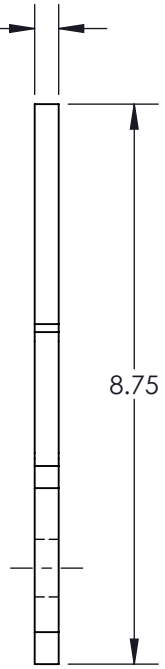
RING

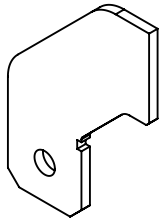
REVISIONS

REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		**-7** ARM WAS .38 X 6.14 X 9.88 IS .38 X 6.24 X 8.75.	10/29/2010	WP	DW
4		**-7** CH'D DIM WAS .323 - .313 IS (.313) S.F. -5.	6/17/2014	DJN	GE
5	15-0301	**-7** CH'D MATERIAL CALLOUT WAS 1018 IS 1018/1020, ADDED .12 X 45° CHAMFER.	9/15/2015	RJC	GE
6	17-0039	**-7** CH'D MAT'L WAS 1018/1020 IS A514 CR. CH'D DIM WAS (.313 S.F. -5) IS .350-.342 (S.F. -5).	2/10/2017	DPD	JAG

SEE ATTACHED DEVIATION







-7

ARM

DART AEROSPACE

TITLE: AC & MR LIFTING SLING

DWG NO. RBW0705G00131-3G-7 REV. 6

MAT'L	A514 CR
HEAT TREAT	
FINISH	SEE -1
SPEC	
DRAWN BY:	PERRITT
CHECKED:	SM 02/10/2017
OPPS APPR:	AA 02/13/2017
QA APPR:	JL 05/09/2017
APPROVED:	JAG 05/09/2017
SCALE	1:3
DATE	4/1/2009

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
.XXX ± .010 FRACTIONS ± 1/8
.XX ± .03 ANGLES ±1°
.X ± .1 SURFACES = 125

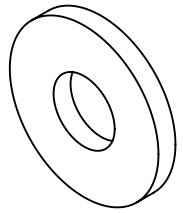
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

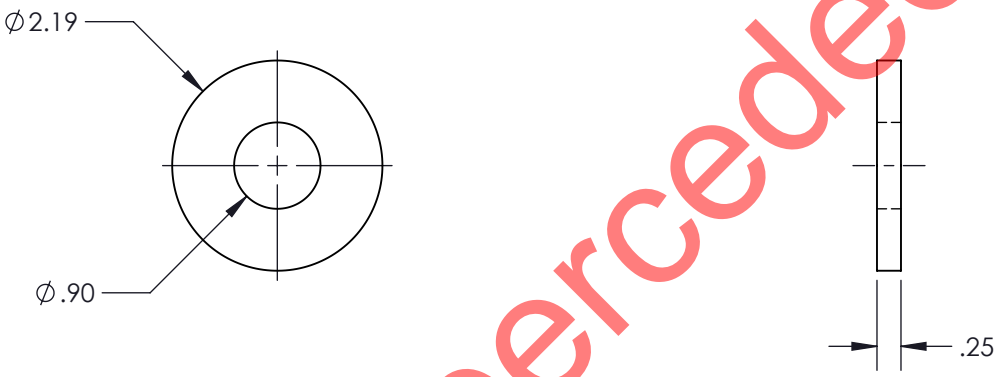
USED ON MODEL: AW139

SHEET 5 OF 8

REVISIONS

REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
6	17-0039	**-9** CH'D MAT'L WAS 1018/1020 IS A514 CR.	2/10/2017	DPD	JAG





SEE ATTACHED DEVIATION

DART AEROSPACE

TITLE: AC & MR LIFTING SLING

DWG NO. RBW0705G00131-3G-9 REV. 6

MAT'L	A514 CR
HEAT TREAT	
FINISH	SEE -1
SPEC	
DRAWN BY:	PERRITT
CHECKED:	SM 02/10/2017
OPPS APPR:	AA 02/13/2017
QA APPR:	JL 05/09/2017
APPROVED:	JAG 05/09/2017
SCALE	1:2
DATE	4/1/2009

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
.XXX ± .010 FRACTIONS ± 1/8
.XX ± .03 ANGLES ±1°
.X ± .1 SURFACES = 125

1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

USED ON MODEL: AW139

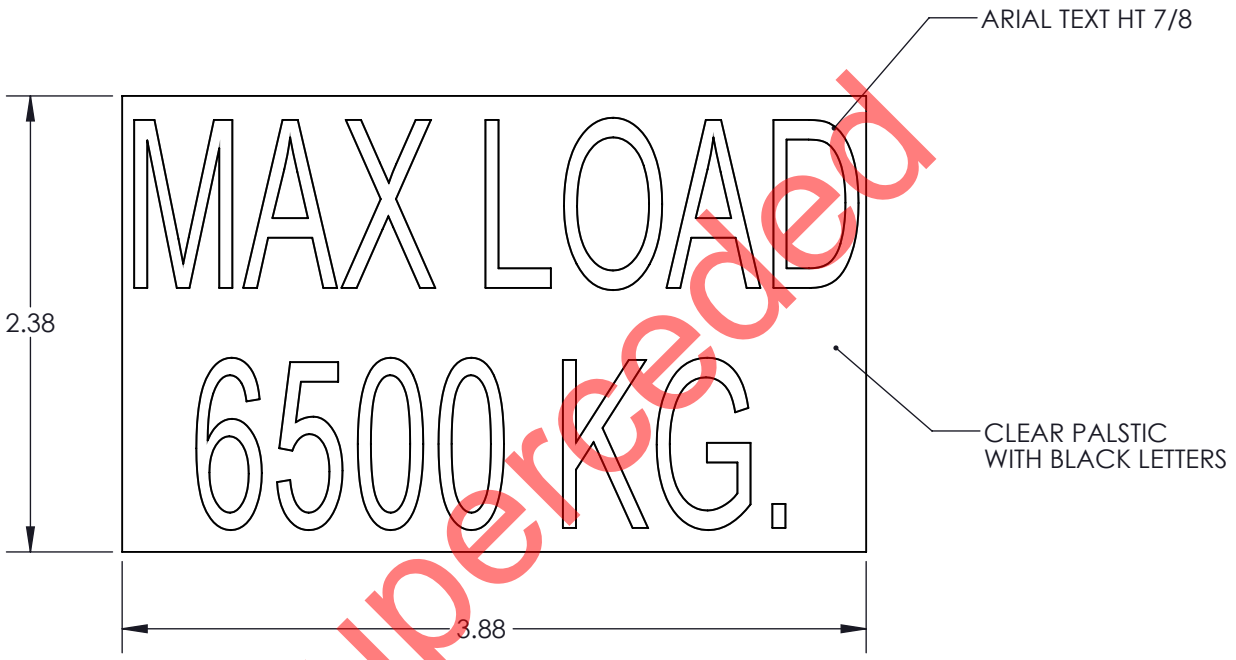
SHEET 6 OF 8

(-9)

SPACER

REVISIONS

REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3A		**-13** CH'D LETTER SIZE WAS 1/2 IS 1.	2/26/2013	BIM	RW
5	15-0301	**-13** ADDED DRAWING.	9/15/2015	RJC	JAG
6	17-0039	**-13** CH'D TOLERANCES WAS ±.005 IS ±.010, WAS ±.01 IS ±.03.	2/10/2017	DPD	JAG



SEE ATTACHED DEVIATION

(-13)

EMBLEM

DART AEROSPACE

TITLE: AC & MR LIFTING SLING

DWG NO. RBW0705G00131-3G-13 REV. 6

MAT'L	CLEAR PLASTIC
HEAT TREAT	
FINISH	
SPEC	
DRAWN BY:	CLOUGH
CHECKED:	SM 02/10/2017
OPPS APPR:	AA 02/13/2017
QA APPR:	JL 05/09/2017
APPROVED:	JAG 05/09/2017

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
.XXX ± .010 FRACTIONS ± 1/8
.XX ± .03 ANGLES ±1°
.X ± .1 SURFACES = 125

1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

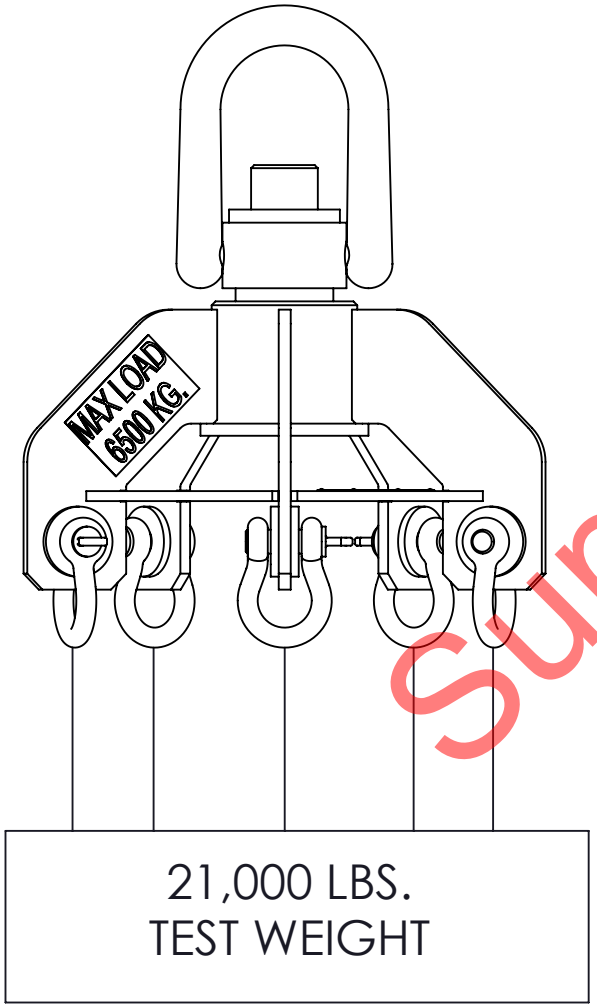
USED ON MODEL: AGUSTA AW139

SCALE 1:1 DATE 8/31/2015 SHEET 7 OF 8

REVISIONS

REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3B		ADDED FIRST ARTICLEWEIGHT TEST SHEET.	10/31/2013	RJC	RW
6	17-0039	1ST PARAGRAPH ADDED LIFTING THE AIRCRAFT.	2/9/2017	DPD	JAG

INSPECTION & TESTING PROCDURES FOR THE RBW0705G00131-3G, AC & MR HEAD LIFTING SLING. THIS ASSEMBLY IS DESIGNED EXCLUSIVELY FOR LIFTING THE AIRCARFT AND INSTALLING/REMOVING THE MAIN ROTOR HEAD.
INSPECT THIS ASSEMBLY PRIOR TO EACH USE. **REPLACE ANY ITEMS THAT ARE DAMAGED OR SUSPECTED OF DAMAGE BEFORE USING.**



21,000 LBS.
TEST WEIGHT

FIRST ARTICLE WEIGHT TEST

1. AFTER INSPECTION PLACE SLING ASSEMBLY ON A OVERHEAD LIFTING DEVICE. ATTACH 5 CONNECTOR HOOKS TO AN APPROPRIATE TEST WEIGHT OF 21,000 LBS.

2. LIFT WEIGHT FOR AT LEAST 5 MINUTES, CONTINUALLY CHECKING FOR CRACKS, DEFLECTION, OR DISTORTION.

3. REMOVE WEIGHT AND RE-INSPECT SLING, CHECKING FOR STRESS CRACKS, BENDING, OR DISTORTION.

INSPECTOR: _____
TESTER: _____
S/N: _____
DATE: _____

SEE ATTACHED DEVIATION

DART AEROSPACE
190 S. Danebo Ave., Eugene, OR. 97402
1-800-556-4166
e-mail: sales@dartaero.com
dartaerospace.com

TITLE: AC & MR LIFTING SLING

DWG NO.	REV	
RBW0705G00131-3G	6	CUSTOMER 1 OF 1
SCALE 1:6	DATE 4/1/2009	SHEET 8 OF 8

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No RBW0705G00131-3G REV. 6

NCR No.

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐
Machining	☐	Small Fab	☐	Prod. Eng. Coor.	☐	Quality	☐
Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐
Large Fab	☐	Composite	☐	Supplier	☐		☐

Date :

Step #:

QTY Effective :

MRB (QSI042) Approval

M Lee

OCT 4, 2018

Description Work Order Deviation

RBW0705G00131-3G-3

MATERIAL WAS A514 CR

MATERIAL IS 4140/4142 (28-32 RC)

PER KPT

Disposition

- THIS DEVIATION IS ACCEPTABLE.

- THE FIT, FORM AND FUNCTION OF THE PART WILL BE AS ORIGINALLY INTENDED

Completed By

Lead hand / Supervisor Approval Verification

QC / QA Coordinator Approval

Superceded

Root Cause

Environment			No Re-verfication
Design	X		Operator
Doc/Data			Offset/Setup
Equip/Tooling			Supplier
Handling/Pre			Training
Material			Use for Testing
Internal Transport			Poor Information
Tribal Knowledge			Rushing
LOA			Product Improvement
Substation			Process Improvement
Past Expiry Date			Manufacturing Process
Misidentified			Past Due

FAULT CATEGORY

☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence

☐ OTHER :